

California Regional Water Quality Control Board
Santa Ana Region

June 29, 2007

ITEM: 

SUBJECT: Waste Discharge Requirements for Mary Borba Parente, Vila Borba Project, Butterfield Ranch Road south of Pine Avenue, City of Chino Hills, San Bernardino County – Order No. R8-2007-0011

DISCUSSION:

Mary Borba Parente (hereinafter, discharger) proposes construction of the Vila Borba Project (Project). This proposed Order prescribes waste discharge requirements (WDRs) for the fill, diversion, and hydromodification of portions of natural drainages on the Project site. These WDRs address on-site mitigation for the impacts of the Project on the water quality standards (water quality objectives, beneficial uses, and antidegradation policy) of these drainages, which contain riparian and wetland habitat of varying quality. These drainages are waters of the state, parts of which are also considered waters of the U.S. The water quality standards are defined in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

Development of the Vila Borba Project, proposed initially in 1999, has a lengthy and complicated regulatory history involving the Regional Board, U. S. Army Corps of Engineers, California Department of Fish and Game, the State Water Resources Control Board, and other agencies and parties. The Project has been modified to address concerns identified by these parties. The Regional Board's administrative record for this Project documents this extensive regulatory history. For the purposes of the proposed Waste Discharge Requirements, it suffices to indicate that the State Board determined that the issuance of individual WDRs for the Project was appropriate and not a waiver of WDR or other regulatory action. A Report of Waste Discharge (ROWD) for the modified Project was initially submitted on March 15, 2005. Subsequently, Regional Board staff requested additional information from the discharger, including proposed mitigation measures, and reviewed the project's Environmental Impact Report. The ROWD was determined to be complete on November 20, 2006.

Project Description

The Project consists of a residential and commercial development encompassing approximately 181 acres of a 336-acre Project area located on the piedmont draining the eastern Puente (Chino) Hills, in the southeastern City of Chino Hills (City) (Attachment A). The discharger will dedicate, through deed restriction, the remaining 155 acres (approximate) of the elevated southwestern Project area as a conservation easement contiguous to Chino Hills State Park. The Project is situated on both sides of Butterfield Ranch Road, south of Pine Avenue. Existing developments are located north ("Pinehurst West") and south ("Hunters Hill") of the Project area. All but the northeastern corner of the property is located west of State Route 71 (SR 71).

The Project area comprises five tracts, Tract Nos. 15710, 15989, 16338, 16413, and 16414. All of Tract No. 15710 will be included within the Chino Hills conservation

easement. The discharger proposes to develop the northern portion (Tract No. 15989), central portion (Tract No. 16413), and southeastern portion (Tract No. 16338) of the Project area with up to 351 single-family residences, streets, and a park. Approximately 280 multi-family residences, with commercial sites, will be constructed on the northeastern portion of the site (Tract No. 16414). A total of 631 dwelling units is proposed, representing a decrease in total units from an earlier Project proposal (835 units).

The loss or impairment of much of the site's surface water beneficial uses will be caused by the fill of portions of approximately seven natural drainage channels (including associated tributaries, swales, and wetlands) in the northern, central and eastern portions of the site (Attachment B). The proposed Project will not require the import of fill, but will entail overexcavation and recompaction of an estimated 112,025 cubic yards of on-site earth material, and placement of an estimated 120,075 cubic yards of engineered fill into drainages on the Project site.

The impacted drainages occupy the distal portions of two sub-watersheds of the eastern Chino Hills (informally identified in the ROWD as "Northerly and Southerly Drainage Basins") that are separated by an east-west trending ridge (central ridge). Each sub-watershed contains two dominant drainages that flow easterly, converge, and enter culverts that convey flows beneath SR 71 for discharge into the Prado Basin:

- In the "Northerly Drainage Basin" (Tract No. 15989), stream channels referred to as the "North" and "Middle Drainages" flow toward Pine Avenue. The Middle Drainage flows toward a wetland (approx. one acre). Currently, most "Northerly Drainage Basin" flow eventually enters the Butterfield Ranch Road storm drain, which extends north from Pine Avenue to a box culvert crossing under SR 71, and discharges into the Chino Creek wetlands upstream of the Prado Basin.
- In the "Southerly Drainage Basin," the "South Drainage," a stream channel that has historically flowed from local ravines to the Prado Basin, crosses the southern "panhandle" of Tract No. 15710 and turns north, then east, through a culvert under Butterfield Ranch Road. This flow converges with flow from a small ravine to the north that is truncated by the Butterfield Ranch Road crossing and is called the "Cutoff Drainage" (Tract No. 16413). East of Butterfield Ranch Road, the consolidated flow is referred to as the "East Drainage" as it crosses the southeastern Project area (Tract No. 16338). The "East Drainage" leaves the property to cross a triangular City-owned holding (Tract 13880-7). The Tract 13880-7 channel enters a 6-foot box culvert extending beneath SR 71 freeway ("Tract 13880-7 box culvert").

Implementation of the proposed Project will redirect the affected portions of the above-referenced drainages into underground storm drains and wetland diversion basins as discussed below, and major storm flow will continue to discharge offsite. Of the five tracts, Tract No. 16414 has minimal channelization, with general sheet flow drainage toward an existing 42-inch storm drain that also extends beneath SR 71 and discharges to the Prado Basin. South of this storm drain, a viaduct beneath SR 71 provides access to the two Southern California Edison (SCE) transmission line easements that cross the Project site. This viaduct does not transport water but does provide access to a proposed mitigation site on the east side of SR 71.

Impacts to Beneficial Uses

All site drainages are tributary to Chino Creek, Reach 1B, which is within the Prado Basin Management Zone (PBMZ). The beneficial uses of Chino Creek, Reach 1B, include Water Contact Recreation (REC1); Non-Contact Water Recreation (REC2); Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); and Rare, Threatened, or Endangered Species Habitat (RARE). Pursuant to the tributary rule specified in the Basin Plan, the drainages on the Project site that will be affected by project implementation are assumed to have these same beneficial uses. Implementation of the proposed Project (Attachment C) will significantly impact these beneficial uses through the following actions. At least 1,800 feet of the existing eastern ends of the North and Middle Drainages will be filled, and storm water flows discharged from the tributary sub-watershed will be carried through the Project enclosed within large diameter underground pipes. While North Drainage flows will continue to reach the Butterfield Ranch Road storm drain and flow north to wetlands along Chino Creek (within the PBMZ), Middle Drainage flows will be diverted across Butterfield Ranch Road to the eastern Project area. The South Drainage will be preserved both on Tract 15710 and on City property west of and adjacent to Butterfield Ranch Road, where the existing detention basin will undergo minor modification (a riser and new bulkhead, Attachment D1), in order to regulate flow that will continue north beneath Butterfield Ranch Road and eventually east to Prado Basin. The Cutoff Drainage, including a small ravine and seep, will be filled and replaced by an underground storm drain pipe. All of the East Drainage within the property boundary, including minor tributaries to the Cutoff Drainage and the Butterfield Ranch Road storm drain, will be filled and replaced by underground storm drain pipe.

The East Drainage has the most extensive riparian habitat value of the channels on the Project site, supporting RARE, WARM, WILD, and REC2 beneficial uses. This drainage contains Mulefat Scrub, Southern Cottonwood-Willow Riparian Forest, and Southern Willow Scrub vegetative communities that directly support these uses. The existence of RARE has been supported by the presence of least Bell's vireo (*Vireo belii pusillus*) in the Middle and East Drainages. Five adults and two fledglings were recorded during a Focused Survey conducted for the wetlands delineation. Habitat suitable for the southwestern willow flycatcher (*Empidonax trailii extimus*) was noted in the North Drainage, but presence of the species itself was not confirmed. All other drainages, including a swale in Tract No. 16338, were found to support elements of the riparian communities noted above, with numerous non-protected transitory vertebrate species, even though the area is generally degraded by cattle grazing. Filling of the existing channels in the Project area, as proposed, will eliminate the drainage's beneficial uses and habitat described above.

Permitting

California Department of Fish and Game (CDFG) has determined jurisdiction over 3.19 ac of impacted riparian habitat (impacted "waters of the state") within the Project footprint. A subset of this acreage (2.49 acres) is "waters of the United States" subject to the jurisdiction of the U.S. Army Corps of Engineers (USACOE). Of the 2.49 acres, 1.8 acres are wetlands. The largest discrete wetland, located at the northern boundary west of Butterfield Ranch Road, will be replaced by Basin No.1, one of three on-site wetland

basins in the mitigation program developed for this Project. In October 1999, the discharger submitted an application to CDFG for a Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Section 1603. CDFG was unable to process the application within the 60-day period provided by law, and, as a result, issuance of the SAA was waived. CDFG later issued its concurrence with U.S. Fish and Wildlife Service (USFWS) conclusions and recommendations for the Project (see below).

On January 11, 2002, a Clean Water Act (CWA) Section 404 permit (404 Permit No. 199915475-GS) was issued to the discharger by USACOE, for discharges of fill to waters of the U.S. The discharger has been granted 404 Permit extensions, most recently on July 27, 2006. As a prerequisite to the 404 Permit, on March 5, 2001 the USFWS issued a Biological Opinion that specified mitigation for the impacts of the project on threatened or endangered species, following an Endangered Species Act consultation. The CDFG issued a Consistency Determination agreeing to the Biological Opinion on September 27, 2001, pursuant to Fish and Game Code Section 2080.1. The Biological Opinion was most recently amended on March 3, 2004, after surveys identified the on-site presence of least Bell's vireo, and USFWS ruled that the Project would not jeopardize the continued existence of the species provided that specific mitigation was implemented. The discharger submitted a Habitat Mitigation and Monitoring Plan (HMMP) to USACOE on November 3, 2003. The HMMP was incorporated into the 404 Permit. The HMMP was considered finalized by USACOE and the USFWS on March 3, 2004 with the second amendment of the Biological Opinion. Regional Board staff believes that the 404 Permit, as extended, reflects the most recently updated Biological Opinion, HMMP, and Project tract numbers.

After finalization of the HMMP in March 2004, a California Environmental Quality Act (CEQA) Initial Study of the Project was conducted by the City and subsequently discussed with Board staff. The ROWD was submitted on March 15, 2005. In a March 25, 2005 letter to the discharger's representatives, Board staff notified the discharger that the ROWD was incomplete, and requested additional information, including documentation of CEQA compliance. A Draft Environmental Impact Report (DEIR) for the Project was distributed by the City of Chino Hills on June 3, 2005, and on July 15, 2005, Regional Board staff issued a letter commenting on the DEIR. The City Council adopted the DEIR, with a Response to Comments, as a Final EIR, on April 25, 2006 and filed a Notice of Determination with San Bernardino County on April 26, 2006, in compliance with CEQA.

During and after the review of the ROWD and DEIR, Board staff identified a shortfall in beneficial use mitigation proposed by the discharger and worked with the discharger to locate additional mitigation acreage within and adjacent to the Project area. Candidate mitigation sites were identified and considered through meetings, field visits, and communications between Board staff and discharger representatives. The accepted sites, as well as issues inherent to these negotiations, are described below. Site maps showing mitigation locations, storm water quality management features, and other information necessary to address Board staff concerns with the Project were submitted by November 2006. The ROWD was determined to be complete by staff letter issued on November 20, 2006.

HMMP Mitigation Measures

Throughout the Board's involvement with this Project, staff has required that the discharger examine Project alternatives that avoid impacts to beneficial uses before selecting alternatives that result in impacts to beneficial uses and that require compensatory mitigation. Owing to the Project's many design constraints, discharger representatives have not been willing to further change the Project design to avoid the on-site drainages. They cited the measures previously established in the HMMP agreed to by the USACOE, USFWS and CDFG, as shown on Attachment C, to mitigate for the loss of waters of the state and the U.S., as well as loss of upland habitat. Upland mitigation measures are not under Regional Board purview but are mentioned here in the context of summarizing the HMMP program.

Two vegetated water quality wetland basins without forebay divisions have been planned as structural Best Management Practices (BMPs) for the Project. They will serve the dual functions of replacement wetlands and storm water runoff water quality treatment BMPs. A Continuous Deflective Separation (CDS) unit will be installed in the storm drain system ahead of each Basin to remove floatable debris and a large percentage of suspended solids, sediment, oil, and grease from storm water runoff. The CDS units will contain adsorbent filters, sorbents, and oil retention baffles (EIR p. 5-196). Risers in each basin will control water level and basin overflow.

- **Basin No. 1** (1.00 acre wetted area; total 1.34-acre footprint). Low-flow diversion drains will convey dry-weather and "first-flush" rainfall runoff flows from the proposed North and Middle Drainage storm drains into the proposed Basin No. 1 (Attachments C and D1).
- **Basin No. 2** (3.68-acre wetted area; total 4.59-acre footprint). On the southeastern side of Tract No. 16414, the Middle Drainage storm drain joins the East Drainage storm drain at a second basin, Basin No. 2. This larger basin has been calculated to receive flow from both sub-watersheds, and it is meant to function as a water resource for wildlife using the central ridge corridor. A diversion will be constructed to direct dry weather and first flush low flows from storm drains serving Tracts 16338 and 16413 to this basin. The main subsurface storm drain will send major flows directly to the Tract No. 13880-7 channel and box culvert, and off site (Attachments C and D2).
- **Upland Restoration** Native species planting (9.40 acres), the dedication of Tract No. 15710 and other upland areas (Attachment C), and the use of the central ridge beneath the SCE transmission line easements as a wildlife corridor are expected to benefit wildlife transit between the Chino Hills and the Prado Basin, via the SCE viaduct and to a lesser extent, the Tract 13880-7 box culvert. The HMMP agreement would mitigate for loss of the 3.19 riparian acres identified by the CDFG, by the restoration of 9.57 acres of wetland and upland plant community, using a 3:1 mitigation ratio. These 9.57 acres will be apportioned among Basin No. 1 (1.00 acre), Basin No. 2 (3.68 acre), sycamore and willow planting, and a 4.89-acre strip of Riversidean sage scrub and oak woodland to be relocated above the Middle Drainage.

Additional Mitigation Required by Regional Board

Board staff determined that the HMMP's apparent emphasis on mitigation through conservation of upland habitat did not provide sufficient compensation for the projected loss and impairment of beneficial uses within the existing watercourses in the Project area. The combined 4.68-acre riparian/wetland component of the 9.57-acre HMMP mitigation represents an insufficient 1.5:1 ratio for in-kind mitigation of the 3.19 acre riparian area. Further, while water quality treatment wetlands are generally acceptable as mitigation, staff recognizes that they may never achieve the ecological function of a natural wetland, and that they may expose wildlife to non-point source urban pollutants. It would not be fully compensatory to replace a natural wetland receiving few non-point source inputs with a water quality wetland treatment BMP. Although CDS units may reduce pollutant loadings of some constituents, they are not effective at reducing concentrations of dissolved pollutants and pathogens. Consequently, Board staff determined that additional area capable of supporting REC2, WILD, WARM and RARE, and providing the pollutant attenuation functions of wetlands, was necessary to augment mitigation measures already established by the HMMP agreement.

The following additional measures (Attachment D2) to mitigate for the loss of the project area's WILD, WARM, RARE, and REC2 beneficial uses that will occur as the project is developed:

- **Third Wetland Basin (Basin No. 3;** 1.04 acres, total area 2.58 acres). Similar to the other two wetland basins (with CDS unit, riser, outlet pipe, riparian plantings), Basin No. 3 will be constructed at the eastern end of Tract 16414 to treat storm water runoff and dry-weather flows from the entire tract. Overflow from the basin will flow to a newly constructed seasonal depression on the eastern side of SR 71, via an existing 42-inch reinforced concrete drainage pipe beneath SR 71.
- **Created Seasonal Depression** (0.25 acres, total area 1.55 acres). The unused northeast corner of Tract 16414, a remnant, 1.55-acre triangular lot east of SR 71, will be graded into a concavity to create a type of water body known as a "seasonal depression." The intent is to collect rainfall, along with intermittent runoff from the immediate area and overflow from Basin 3, in a 0.25-acre pond. Seasonally, this wetted area will support the above beneficial uses while providing a resource to wildlife. The existing SCE easement road, which crosses the southern part of the lot, will be protected. The adjacent SCE viaduct provides access.
- **SCE Easement Seasonal Depression** (wetted area varies; total area 1.23 acres). A former borrow pit that collects localized runoff is located upon the lower portion of the central ridge, within the SCE easement. This site will remain ungraded and protected as a seasonal depression. It will provide a passive ponding feature in the ridge's wildlife corridor immediately east of Avenida De Portugal (main road).
- **Channel To Box Culvert** (No acreage included). Flows leaving the area of Basin No. 2 will enter the channel crossing City-owned Tract No. 13880-7 and flow into the box culvert under SR 71. This channel is deeply incised and supports a narrow strip of mature riparian habitat. Board staff requested that the City and the discharger dedicate a conservation easement or other formal restriction to preserve

the channel and the integrity of its beneficial uses. The City chose not to enact an easement or similar dedication but to include this channel with other sites in its current study regarding their potential protection. The study team includes the CDFG, which confirmed that this channel is under review. Because there is no guarantee of protection to date, nor has any deed restriction or land transaction encumbered any portion of Tract No. 13880-7 into the Project, any future encroachment upon the channel will necessitate a separate 404 permitting process.

Table 1 of the proposed Order summarizes the key water-quality mitigation measures and designed wetted acreages. Table 1 indicates that 4.68 acres of new wetland (out of 9.57 total compensatory acres in the HMMP) will combine with 1.04, 0.25, and 1.23 acres of wetland basin/seasonal depression area agreed to with Board staff (Oct. 25, 2006, letter from discharger representatives), to provide a total of 7.2 potentially wetted acres that will mitigate for the proposed loss or impairment of 3.19 acres of CDFG-jurisdictional state waters and their associated beneficial uses. Total dedicated acreage for these basins and depressions, including embankments and peripheral features (11.26 acres) surpasses a 3:1 mitigation ratio. In addition, in the upper Project area out of the construction footprint, within the approximately 155 acres of open space that will be preserved as a conservation easement, there are 2.08 acres of CDFG-jurisdictional riparian habitat that will be avoided, including 1.66 acres of state/federal wetlands.

Monitoring and Reporting Program

This proposed Order requires the discharger to implement the overall mitigation program as proposed, and to comply with Monitoring and Reporting Program (M&RP) R8-2007-0011. This includes a requirement for quarterly reporting of mitigation compliance for a minimum six-year period from the commencement of construction to the post-Project phase. Once success criteria specified in the HMMP and other agreements have been achieved, the Executive Officer may consider revising the M&RP and the Regional Board may consider rescission of the Order. This M&RP reporting requirement is intended to integrate with the discharger's HMMP five-year implementation requirement, not to duplicate it.

The 2005 ROWD states that the discharger will conduct maintenance and monitoring until a Homeowners Association (HOA) is functioning. The HOA will then, "...engage the proper qualified consultants to perform water monitoring, silt removal, maintenance, and protection of wetlands, habitat creation, and open space..." as well as be responsible for annual fees. In the ROWD, the discharger also states that if the HOA defaults in these responsibilities, the HOA will pay the City to carry out this work. A conservation easement is to be placed over open space and newly created habitat, including the wetland basins, under the management of "...a private conservation group...to be selected prior to grading." The City's April 2006 Conditions of Approval for the Project largely shift these commitments to a future Landscape and Lighting Assessment District (LLAD), although more than one HOA is anticipated that will assist with landscape maintenance. The City has required (Conditions 12, 15, and 152) that the discharger assure that the mitigation areas and water quality management features described above are properly protected through conservation easements and appropriate perpetual maintenance. To that end, the City requires the discharger to

create an LLAD responsible for "...maintenance of all programs of all natural or re-created waterways (streambeds)," "components of the HMMP not dedicated to a conservation entity," "wetlands" and "natural, native, and/or re-established open space."

The proposed Order requires that within 120 days of commencement of the initial phase of construction, the discharger shall "...develop an Operations and Maintenance Plan (OMP) in conjunction with the Regional Board," as instructed by Special Condition No. 19 of the 404 permit, and submit the OMP for approval by the Executive Officer. The OMP is to document specific maintenance and monitoring practices that will be implemented to assure the continued effectiveness of the water-quality basins, seasonal depressions, stormwater runoff BMPs, and riparian habitat. Specific habitat success criteria for each individual mitigation site, derived from the conditions established in the 404 Permit, the Biological Opinion, the HMMP and associated biological monitoring, the ROWD, the Final EIR, the City's project conditions, and this Order, must be incorporated into the procedures specified in the OMP. A combined document for all site mitigation conducted for all relevant agencies is satisfactory.

Further, the OMP must designate the parties and persons responsible for implementing the OMP, and a procedure for documenting and accepting delegation of authority for implementation of the OMP from one party to another. The City's Project conditions and the OMP provide an adequate level of assurance that there will be a dependable entity that is responsible for monitoring and maintaining the mitigation and water quality management facilities required by the WDRs.

Stormwater Runoff and Recycled Water Use Permits

The discharger must file a Notice of Intent for coverage of the Project under the SWRCB's "General Permit for Storm Water Discharges Associated with Construction Activity," Water Quality Order (WQO) No. 99-08-DWQ, NPDES Permit No. CAS000002 (and subsequent iterations of this general permit), in compliance with Clean Water Act Section 402. WQO No. 99-08-DWQ requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared and available on site during construction.

The City of Chino Hills will require the discharger to comply with applicable provisions of the Regional Board's Waste Discharge Requirements (Order No. R8-2002-0012, NPDES Permit No. CAS618036) for "San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region, Area-Wide Urban Storm Water Runoff," also known as the San Bernardino County municipal separate storm sewer system, or "MS4," permit. All development must conform to the Water Quality Management Plan (WQMP) requirements of the MS4 permit by implementing a variety of structural and non-structural BMPs controlling discharge of pollutants to the MS4 from both point and non-point sources. The EIR states that a project WQMP has already been approved by the City of Chino Hills.

A 6-million-gallon recycled water reservoir will be constructed above the Middle Drainage on the highest, westernmost point of the Project area. The Inland Empire Utilities Agency (IEUA), in accordance with recycled water provisions in their WDRs,

Basin No. 2
(see Attachment D2)

Upland Restoration

Basin No. 1
(see Attachment D1)

**Sites for separate mitigations
(see Attachment D2)**

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Adapted by RWQCB-8

PREPARED BY:

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